

The occurrence of *Synurella ambulans* (MÜLLER, 1846) (Crustacea, Amphipoda) in Neusiedlersee

(Lake Fertő, at the Austrian-Hungarian border)

By S. ANDRIKOVICS, L. FORRO and H. METZ

(Vorgelegt in der Sitzung der mathem.-naturw. Klasse am 29. April 1982 durch das
W. M. HEINZ LÖFFLER)

Hydrozoological study of Lake Fertő has been going on for the past hundred years. Samples have been taken systematically on both the Austrian and the Hungarian side of the lake since the end of the 1960s. A monograph was published on the fauna of the Austrian side in 1979 (LÖFFLER, 1979), which, like the data collection of ANDRIKOVICS and BERCZIK (1975) on the aquatic fauna of the Hungarian basin, did not contain any faunistical data on Amphipods. Nor did PONYI and DÉVAI (1979) report amphipods from the Hungarian side of the lake. This peculiarity of the fauna of Lake Fertő was noted by ENTZ (1979), therefore it is of some interest that recently some specimens of *Synurella ambulans* have been collected at two different points in the lake.

The previous "lack" of amphipods prompted us to provide an ecological evaluation on the basis of the collected zoological material and the literature dealing with Lake Fertő.

During the course of scientific evaluation of the above mentioned materials, it became clear that *S. ambulans* has not previously been found so far in Lake Fertő. On the Austrian side of the lake the species was found in 1975 in a reed-bed channel in the region of Neusiedl/See and then in the spring of 1979, in the reeds of a small isolated lake, the "Kis-Herlakni tó", in the reed belt on the Hungarian side. Both localities may be characterized as black sodic waters overgrown with vegetation. At both sites the KMnO_4 consumption was high at low pH, (above the value 20 mg/l, ANDRIKOVICS, unpublished data; STEHLIK, 1972).

The fauna of both sites were similar, characterized by species typical of the edges of reeds rich in dissolved and particulate organic matter: *Cloeon dipterum*, *Caenis robusta*, *Planorbis planorbis*, *Bythinia tentaculata*, *Limnaea peregra*, *Asellus aquaticus*, *Sigara striata*, *Naucoris cimicoides* and various unidentified species of Chironomidae.

In Europe, *Synurella ambulans* is known from Germany, Poland, Czechoslovakia, Italy, Yugoslavia, the Soviet Union, Austria and Hungary. VORNATSCHER (1965) reported it from four localities in Austria. In Hungary it was first found in the Bakony mountains (DUDICH, 1924). Apart from smaller ponds of various kinds, it is known from Lakes Balaton and Velence. In flowing waters, this species has usually been found in lenithic habitats overgrown with vegetation or covered with a thick layer of litter, also in bogs and wells (DUDICH, 1927,

1941). It has been recorded from a slightly alkaline channel near Kistelek (DVIHALLY and PRONYI, 1957). In Hungary, *S. ambulans* occurs in association with *Asellus*, *Niphargus* and *Gammarus* species.

We must resort to speculation as regards the occurrence of *Synurella ambulans*. If we assume that the intensity of collection was sufficient right from the beginning, i. e. the end of 1960s, to obtain a full knowledge of the fauna, then there are two possible explanations. On the one hand, the sodic character of the lake is decreasing, which is also indicated by the appearance of other species of crustaceans (HERZIG, 1979). On the other hand, *Synurella ambulans* may have always been present but rare in Lake Fertő, possibly due to poor oxygenation of the reed zone, and the frequent production of H_2S .

Literatur

- ANDRIKOVICS, S., and BERCZIK, Á. (1975): Hydrobiology – Zoology. – in: A data-collection in preparation for a monograph of the Fertő-region. 3. Natural resources: the biosphere of the Fertő-region. Budapest (in Hungarian) 1–457.
- DUDICH, E. (1924): Eine für Ungarn neue Amphipoden-Art. – Annl. hist.-nat. Mus. natn. hung., 21, 244.
- DUDICH, E. (1927): Új rákfajok Magyarország faunájában (Neue Krebstiere in der Fauna Ungarns). – Arch. Balatonicum, 1, 343–387.
- DUDICH, E. (1941): Die im Gebiete des historischen Ungarn nachgewiesenen Amphipoden. – Fragm. faun. hung., 4/16, 14–21.
- DVIHALLY, Zs., and PONYI, J. (1957): Charakterisierung der Natrongewässer in der Umgebung von Kistelek auf Grund ihrer chemischen Zusammensetzung und ihrer Crustacea-Fauna. – Acta Biol. Acad. Sci. Hung., 7, 349–363.
- ENTZ, B. (1979): Opposition of a candidate thesis before the academy, 1–5 (in Hungarian).
- HERZIG, A. (1979): The Zooplankton of the open lake. – In: H. LÖFFLER (ed.): Neusiedlersee, the limnology of a shallow lake in Central Europe. Dr. JUNK, The Hague, 281–335.
- LÖFFLER, H. (ed.) (1979): Neusiedlersee, the limnology of a shallow lake in Central Europe. – Dr. JUNK, The Hague, 1–543.
- PONYI, I. E., and DÉVAI, I. (1979): The Crustacea of the Hungarian area of Lake Fertő. – Opusc. Zool. Budapest, XVI, 1–2, 107–127.
- SEHLIK, A. (1972): Chemische Topographie des Neusiedlersees. – S.-B. öst. Akad. Wiss. math.-nat. Kl. Abt. I., 180, 14–278.
- VORNATSCHEK, J. (1965): Amphipoda. – In: Catalogus Faunae Austriae, 8, 1–3.
- Authors' addresses: Dr. SÁNDOR ANDRIKOVICS, Zoosystematical and Ecological Institute of the Eötvös Lóránd University, 1088 Budapest VIII. Puskin u. 3. Hungary. Dr. LÁSZLÓ FORRÓ, Zoological Department, Hungarian Natural History Museum, H-1088 Budapest, Baross u. 13. Hungary. Dr. HEIMO METZ, Biologische Station Neusiedlersee, Biologisches Forschungsinstitut für Burgenland, A-7142 Illmitz, Bgld., Austria.

Összefoglalás

A Fertő osztrák és magyar részéről újabban előkerült *Synurella ambulans* adatait gyűjtötték össze a szerzők. Magyar és osztrák részről is

fekete vizü, nagy vezetőképességü területeken (izolált kis tóill. nádascsatorna) fordult elő. A Fertő első Amphipoda-fajának előkerülésével kapcsolatban kétféle magyarázatot tartunk valószínűnek. Mostani előfordulása a tó szikes jellegének csökkenésével lehet összefüggésben, másrészt lehetséges, hogy mindig jelen volt a Fertőben, de nagyon kis egyedszámban, ami a nádas kedvezőtlen O₂-viszonyaival és a gyakori H₂S képződéssel magyarázható.

ZOBODAT - www.zobodat.at

Zoologisch-Botanische Datenbank/Zoological-Botanical Database

Digitale Literatur/Digital Literature

Zeitschrift/Journal: [Sitzungsberichte der Akademie der Wissenschaften mathematisch-naturwissenschaftliche Klasse](#)

Jahr/Year: 1982

Band/Volume: [191](#)

Autor(en)/Author(s): Andrikovics Sándor, Forró László, Metz Heimo

Artikel/Article: [The occurrence of *Synurella ambulans* \(Müller, 1846\) \(Crustacea, Amphipoda\) in Neusiedlersee \(Lake Fertő, at the Austrian-Hungarian border\). 139-141](#)